

A Leading Manufacturer of Quality Thermocouple and RTD Assemblies Since 1972

Thermocouple Wire

This section has been developed to serve as a guide in the selection of wires to accomplish most all temperature measuring requirements. Featured is a large selection of thermoelements, insulation materials and constructions. Should you need assistance, Thermo Sensors' sales personnel are anxious to help you in selecting the wire to give optimum performance in your application.



Thermo Sensors' thermocouple and extension wires are known for their quality performance and reliability. Careful attention is given to the proper selection and matching of conductors to ensure conformance to standard limits of error as defined in ANSI C96.1. Unless otherwise specified, all wire will be furnished to standard limits of error. Many of the wires are available with special limits of error and must be specified when ordering.

Insulated Thermocouple Wire

**Thermocouple Wire
Duplex - ANSI Type K**

**Color Code: Positive Wire (+) - Yellow
 Negative Wire (-) - Red
 Overall Jacket - Brown with Yellow Tracer

Catalog Number	Wire Size		Type of Wire	Res*	Insulations		Nominal Size Inches	Approx. Shipping Weight #MFT
	Gauge	Inch			Conductors	Overall		
HtHt20K	20	.032	Solid	.590	Vitreous Silica Fiber Braid	Vitreous Silica Fiber Braid	.104 x .176	16
GG20K	20	.032	Solid	.590	Glass Braid	Glass Braid	.055 x .100	8
GwG20K	20	.032	Solid	.590	Glass Wrap	Glass Braid	.054 x .095	8
GnGn20K	20	.032	Solid	.590	Nonimpregnated Glass Braid	Nonimpregnated Glass Braid	.057 x .102	9
TtGGt20K	20	.032	Solid	.590	Teflon (TFE) Tape, Teflon (TFE) Impregnated Glass Braid	Teflon (TFE) Impregnated Glass Braid	.075 x .137	11

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HgHg20K	20	.032	Solid	.590	High Temp. Glass Braid	High Temp. Glass Braid	.100 x .150	16
CtCt20K	20	.032	Solid	.590	Ceramic Fiber	Ceramic Fiber	.104 x .176	16
TxTx20K	20	.032	Solid	.590	Teflon (FEP) Extruded	Teflon (FEP) Extruded	.072 x .124	11
TfTf20K	20	.032	Solid	.590	Fused Teflon (TFE) Tape	Fused Teflon (TFE) Tape	.060 x .10	11
TxTxZS20K	20	.032	Solid	.590	Teflon (FEP) Extruded	Twisted, Alum.-Mylar & Drain Wire: Teflon (FEP) Extruded	.132	16
KZ20K	20	.032	Solid	.590	Fused Kapton Tape	Twisted	.087	8
KK20K	20	.032	Solid	.590	Fused Kapton Tape	Fused Kapton Tape	.052 x .096	11
GgG20FK	20	7/28	Stranded	.538	Double Glass Braid	Glass Braid	.075 x .137	9
GG24K	24	.020	Solid	1.490	Glass Braid	Glass Braid	.047 x .081	4
GwG24K	24	.020	Solid	1.490	Glass Wrap	Glass Braid	.042 x .072	4
P24K	24	.020	Solid	1.490	Polyvinyl	Non-Rip Cord	.048 x .096	4
TfTf24K	24	.020	Solid	1.490	Fused Teflon (TFE) Tape	Fused Teflon (TFE) Tape	.055 x .085	5
KK24K	24	.020	Solid	1.490	Fused Kapton Tape	Fused Kapton Tape	.050 x .080	6
GwG26K	26	.016	Solid	2.370	Glass Wrap	Glass Braid	.040 x .085	3
GwG28K	28	.013	Solid	3.770	Glass Wrap	Glass Braid	.036 x .057	3
GwG30K	30	.010	Solid	5.980	Glass Wrap	Glass Braid	.033 x .052	2

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Duplex - ANSI Type T

**Color Code: Positive Wire (+) - Blue
 Negative Wire (-) - Red
 Overall Jacket - Brown with Blue Tracer

Catalog Number	Wire Size		Type of Wire	Res*	Insulations		Nominal Size Inches	Approx. Shipping Weight #MFT
	Gauge	Inch			Conductors	Overall		
GG20T	20	.032	Solid	.296	Glass Braid	Glass Braid	.055 x .100	5
GwG20T	20	.032	Solid	.296	Glass Wrap	Glass Braid	.054 x .095	8
TfGGt20T	20	.032	Solid	.296	Teflon (TFE) Tape, Teflon (TFE) Impregnated Glass Braid	Teflon (TFE) Impregnated Glass Braid	.075 x .137	12
TxTx20T	20	.032	Solid	.296	Teflon (FEP) Extruded	Teflon (FEP) Extruded	.072 x .124	11
TfTf20T	20	.032	Solid	.296	Fused Teflon (FEP) Tape	Fused Teflon (FEP) Tape	.080 x .130	11
TxTxZS20T	20	.032	Solid	.296	Teflon (FEP) Extruded	Twisted, Alum.-Mylar & Drain Wire; Teflon (FEP) Extruded	.132	16
KK20T	20	.032	Solid	.296	Fused Kapton Tape	Fused Kapton Tape	.052 x .096	11
GG24T	24	.020	Solid	.753	Glass Braid	Glass Braid	.047 x .081	4
GwG24T	24	.020	Solid	.753	Glass Wrap	Glass Braid	.042 x .072	4
NN24T	24	.020	Solid	.753	Nylon	Clear Nylon	.060 x .095	6
P24T	24	.020	Solid	.753	Polyvinyl	Non-Rip Cord	.048 x .096	3
TfTf24T	24	.020	Solid	.753	Fused Teflon (TFE) Tape	Fused Teflon (TFE) Tape	.055 x .085	5
KK24T	24	.020	Solid	.753	Fused Kapton Tape	Fused Kapton Tape	.050 x .080	6
GwG28T	28	.013	Solid	1.905	Glass Wrap	Glass Braid	.036 x .057	2
GwG30T	30	.010	Solid	3.025	Glass Wrap	Glass Braid	.033 x .053	2

Duplex - ANSI Type J

**Color Code: Positive Wire (+) - White
 Negative Wire (-) - Red
 Overall Jacket - Brown with White Tracer

Catalog Number	Wire Size		Type of Wire	Res*	Insulations		Nominal Size Inches	Approx. Shipping Weight #MFT
	Gauge	Inch			Conductors	Overall		
GG14J	14	.064	Solid	.086	Glass Braid	Glass Braid	.096 x .176	32

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KZ16J	16	.051	Solid	.137	Fused Kapton Tape	Twisted	.125	24
GG20J	20	.032	Solid	.357	Glass Braid	Glass Braid	.055 x .100	8
GwG20J	20	.032	Solid	.357	Glass Wrap	Glass Braid	.054 x .095	8
GnGn20J	20	.032	Solid	.357	Nonimpregnated Glass Braid	Nonimpregnated Glass Braid	.057 x .102	9
TfGGt20J	20	.032	Solid	.357	Teflon (TFE) Tape, Teflon (TFE) Impregnated Glass Braid	Teflon (TFE) Impregnated Glass Braid	.075 x .137	11
NN20J	20	.032	Solid	.357	Nylon	Clear Nylon	.068 x .120	11
TxTx20J	20	.032	Solid	.357	Teflon (FEP) Extruded	Teflon (FEP) Extruded	.072 x .124	11
TfTf20J	20	.032	Solid	.357	Fused Teflon (TFE) Tape	Fused Teflon (TFE) Tape	.080 x .130	10
TxTxZs20J	20	.032	Solid	.357	Teflon (FEP) Extruded	Twisted, Alum.-Mylar & Drain Wire; Teflon (FEP) Extruded	.132	16
KZ20J	20	.032	Solid	.357	Fused Kapton Tape	Twisted	.067	8
KK20J	20	.032	Solid	.357	Fused Kapton Tape	Fused Kapton Tape	.052 x .096	11
GgG20FJ	20	7/28	Stranded	.317	Double Glass Braid	Glass Braid	.075 x .137	9
GG24J	24	.020	Solid	.877	Glass Braid	Glass Braid	.047 x .081	4
GwG24J	24	.020	Solid	.877	Glass Wrap	Glass Braid	.042 x .072	4
TfGGt24J	24	.020	Solid	.877	Teflon (TFE) Tape, Teflon (TFE) Impregnated Glass Braid	Teflon (TFE) Impregnated Glass Braid	.062 x .112	8
TfGt24J	24	.020	Solid	.877	Fused Teflon (TFE) Tape	Teflon (TFE) Impregnated Glass Braid	.050 x .082	8
P24J	24	.020	Solid	.877	Polyvinyl	Non-Rip Cord	.048 x .096	4
TfTf24J	24	.020	Solid	.877	Fused Teflon (TFE) Tape	Fused Teflon (TFE) Tape	.055 x .085	5
KZ24J	24	.020	Solid	.877	Fused Kapton Tape	Twisted	.063	4
KK24J	24	.020	Solid	.877	Fused Kapton Tape	Fused Kapton Tape	.050 x .060	6

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GwG26J	26	.015	Solid	1.394	Glass Wrap	Glass Braid	.040 x .065	3
GwG28J	28	.013	Solid	2.216	Glass Wrap	Glass Braid	.036 x .057	3
GG30J	30	.010	Solid	3.520	Glass Braid	Glass Braid	.037 x .059	3
GwG30J	30	.010	Solid	3.520	Glass Wrap	Glass Braid	.033 x .053	3

Duplex - ANSI Type E

**Color Code: Positive Wire (+) - Purple
 Negative Wire (-) - Red
 Overall Jacket - Brown with Purple Tracer

Catalog Number	Wire Size		Type of Wire	Res*	Insulations		Nominal Size Inches	Approx. Shipping Weight #MFT
	Gauge	Inch			Conductors	Overall		
GG20E	20	.032	Solid	.704	Glass Braid	Glass Braid	.055 x .100	8
TfTf20E	20	.032	Solid	.704	Fused Teflon (TFE) Tape	Fused Teflon (TFE) Tape	.080 x .130	10
GG24E	24	.020	Solid	1.780	Glass Braid	Glass Braid		

*Resistance is stated in ohms per Double fee at 20°C (58°F) and are nominal values.

****Color Coding:**

- Kapton Insulations will have a colored fiber tracer under the Kapton on the singles.
- Overall insulations of Kapton and Teflon Tapes are not color coded.
- Some high temperature fibrous insulations are not color coded; others will have a colored tracer. The color pigment burns off at 300°F.